

# **Establishing & Sustaining Healthy Work Environments:**

**Appropriate Staffing and Budgeting of Staff Resources**

**October 11, 2018**

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***“Skill and Passion to Link Financial and Clinical Data for Organization Improvement”***

# Session Objectives

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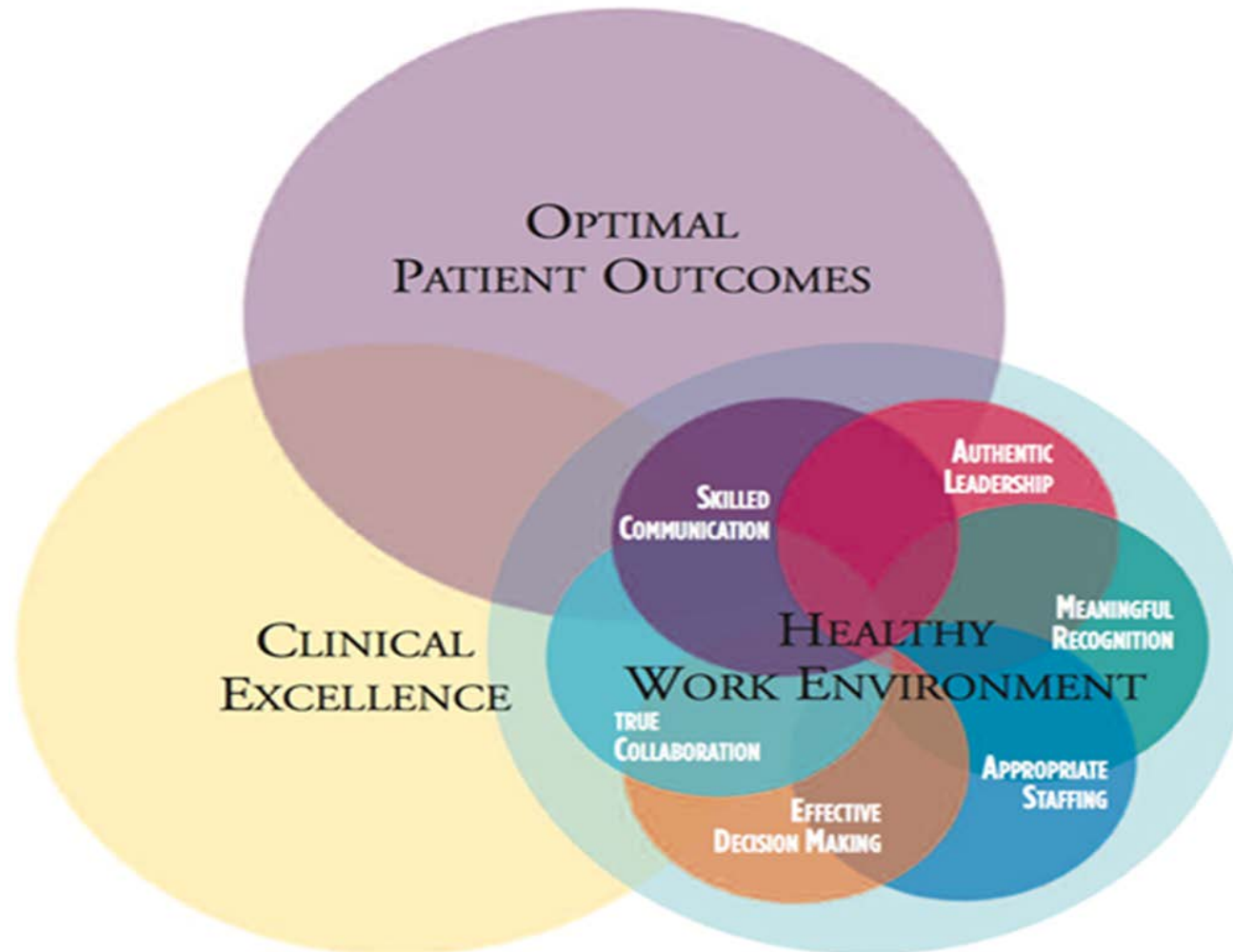
- **Understanding how appropriate staffing is part of a healthy work environment**
- **Understand definition of productivity measures, e.g. hours of care per patient day**
- **Identify how staffing patterns and staff ratios determine hours of care**
- **Discuss day to day decisions that impact nurse staffing**

# Appropriate Staffing as Part of a Healthy Work Environment

- In 2018-2019 Legislative Session for New Jersey bills A1470 and S989 were introduced to establish minimum Professional Registered Nurse Staffing Standards.
  - These standards are proposed for hospitals and ambulatory surgery facilities.
- Organization of Nurse Leaders of NJ (ONL/NJ), the NJSNA, and the NJ Council of Magnet Organizations (NJCOMO), and the NJ Nursing Leadership Council (NJ CLC) do *not* support mandated ratios.
  - They are addressing the bigger issue for the best healthy workforce environment modeled after the American Association of Critical care Nurses (AACN) Synergy Model of Patient Care: Healthy Work Environments.
  - They support hospital based staffing committees of nursing leadership and care providers to discuss resource allocation based on evidenced based practices and competencies for optimal patient outcomes.
  - “Now is the time to stop the regulation of hospital nurse staffing dead in its track.” (Beurhaus, 2010)
    - Focus on creating innovative staffing patterns and develop new roles for nurses

# AACN Synergy Model of Patient Care (AACN, 2016)

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# Appropriate Staffing (AACN, 2005)

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## ***Staffing must ensure the effective match between patient needs and nurse competencies***

- Inappropriate staffing is harmful to patient safety and well-being of nurses.
- Improved outcomes research relates specialty certification and clinical nursing expertise with improved patient outcomes.
- Inadequate staffing leads to nurse dissatisfaction, burnout, and turnover.
  - Nurse turnover jeopardizes quality of care, increases costs and decrease organization profitability.
- Staffing is a complex process matching skills and competencies of nurse with needs of patients.
  - Relying on staffing ratios along ignores variance in patient needs, acuity, and staff competencies.
- Innovations in staffing models needs to be devised and tested.

# Appropriate Staffing(AACN,2005) (cont'd)

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## ***Critical elements:***

- Nurses participate in all organizational phases of staffing process from education, planning, and matching nurses' competencies with patient needs
- Formal processes exist to evaluate staffing decisions on patient and system outcomes.
- Staffing and outcomes data are used to develop more effective staffing models.
- The organization utilizes support services at all levels of activity to ensure nurses can optimally focus on patient care priorities.
- Shared governance models have developed staffing committees or staffing councils to accomplish the following:
  - Educate staff about staffing and budgeting models
  - Obtain staff input into unit staffing plans

# A Culture of Financial Excellence

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- A culture of safety, quality and customer satisfaction is *not* in conflict with a culture of financial excellence.
- Financial excellence drives us to work more effectively with less hassle and work in ways that save time.
- The current and future health care systems are driving for increased economic accountability.
- “Value” is the key word in today’s health care system spoken by payers and customers.

$$\text{Value} = \frac{\text{Quality}}{\text{Cost}}$$

# Income Statement: Profit or Loss?

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The income statement will indicate whether the “bottom line” was a profit or a loss:

- **Profit = Net Revenue – Net Expenses**  
**(Revenues > Expenses)**
- **(Loss) = Net Expenses – Net Revenue**  
**(Expenses > Revenues)**



# Income Statement: 1/01/18- 12/31/18

## Example

### Gross Patient Service Revenue

- Routine patient services \$ 53,000,000
- Deductions from Revenue: \$ (1,000,000)

Net Patient Service Revenue **\$52,000,000**

### Total Operating Expenses

- Salaries & benefits \$ 45,000,000
- Other \$ 6,000,000

Total Operating Expenses \$ 51,000,000

Net income or (Loss)from Patient Services: **\$1,000,000**

### Operating Margin for Patient Services:

Net income from Patient Services **\$1,000,000** = 1.9%  
Net revenue from Patient Services **\$52,000,000**

# Operating Margin

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The operating margin is the percentage of profit that the organization makes from the operation of its business.

- Operating Margin for Hospitals =  
$$\frac{\text{Net Income from Operations}}{\text{Net Revenue from Patient Care}}$$
- What's *your* organization's projected operating margin for fiscal year 2018?



# **Preparation of the Patient Care Unit's Operating Budget**

# The Operating Budget

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- The operating budget is a plan and control for day-to-day operating revenue and expense over a one year period.
- The operating budget contains 3 parts:
  - **Statistical Budget**
    - Assumptions about expected volumes and the scope of activities upon which revenue and expenses are based.
  - **Revenue Budget**
    - Converts the expected unit of service into predicted revenue dollars.
  - **Expense Budget**
    - Converts the expected work into predicted personnel and supply/service expense dollars.
- Annual budgets then are divided into monthly budgets in order to have an adequate basis to control costs during the year.

# Communication and Data are Key

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## **“The Definitions”**

Caregiver

Unit of Service

Hours Per Patient Day

Hours Per ED Visit

Hours Per OR Case

***Why is This Important?***

# Key Terms – Hours of Care Per Patient Day (HPPD)

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## ➤ HPPD – Hours Per Patient Day

❑ Hours of care measured are selected by the organization. For example:

- Nursing Care Hours Per Patient Day (NCHPPD)

- ✓ This would include all nurses and techs providing direct patient care.

- Worked Hours Per Patient Day (WHPPD)

- ✓ This would include all direct care givers plus clerical and administrative staff.

- Paid Hours Per Patient Day (PHPPD)

- ✓ This would include all worked hours for direct care givers and others as well as their benefit hours.

# Key Terms – Hours of Care Per Patient Day (HPPD)

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- HPPD – Hours Per Patient Day (cont'd)
  - ❑ Hours of care are calculated by dividing labor hours for care by patient days.
    - Both hours and patient days need to be for the same time period:
      - ✓ *Annual* hours divided by *annual* patient days
      - ✓ *Pay period* (two weeks) hours divided by *pay period* (two weeks) patient days
      - ✓ *Daily* hours divided by *daily* patient days

# Key Terms – Full Time Equivalent

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- FTE – Full Time Equivalent (1.0 FTE)
  - The hours of a FTE are based on the organization's pay structure:
    - A Full Time Equivalent = 1.0 FTE
      - ✓ The 1.0 FTE could be 40 hours per week  
(52 weeks X 40 hours= 2,080 annual hours)
      - OR
      - The 1.0 FTE could be 37.5 hours per week  
(52 week X 37.5 hours= 1,950 annual hours)

***What's an FTE at YOUR organization?***



# Key Terms – Full Time Equivalent

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- FTE – Full Time Equivalent (1.0 FTE) (cont'd)
  - 1.0 FTE could be made up of one full time employee who works 40 hrs. per week or two or more part-timers to total 40 hrs. per week.
  - Is a 12 hour shift employee working three (3) 12 hour shifts considered “1.0 FTE”?
    - Not usually
    - *Why not?*
      - 36 hours per week divided by 40 hours=.9 FTE  
(If the 1.0 FTE work week is 40 hours.)
      - 36 hours per week divided by 37.5 hours=.96 FTE  
(If the 1.0FTE work week is 37.5 hours.)

# Key Terms - Unit of Service

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## ➤ UOS – Unit of Service

- Units of services are determined by the patient activity:

- ✓ Patient days for bedded units
- ✓ Patient visits for outpatient activity of visit activity, e.g. ED visits, ambulatory care visits
- ✓ Patient minutes or hours for areas where hours for cases are measured, e.g. OR hours
- ✓ Patient births or birth “equivalents”, e.g. for labor & delivery birthing patients

- Therefore, your *unit of service* can be substituted for patient days if you are determining care hours for your unit of services.

# Key Terms - Unit of Service

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- Hours of care are calculated by dividing labor hours for care by your *units of service*.
  - Both hours and units of service need to be for the same time period:
    - ✓ *Annual* hours divided by *annual* units of services, e.g. ED visits, patient births, or OR hours or cases.
    - ✓ *Pay period* (two weeks) hours divided by *pay period* (two weeks) units of services, e.g. ED visits, patient births, or OR hours or cases.
    - ✓ *Daily* hours divided by *daily* units of services, e.g. ED visits, patient births, or OR hours or cases.

# Key Terms- (cont'd)

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## ➤ Position Control

- ❑ The list of budgeted filled and unfilled positions by FTE based on your annual budget.
  - May be maintained by finance, human resources or nursing.
  - Who maintains your position control report at your organization?

## ➤ Caregiver

- ❑ Caregivers may be identified as direct care givers, e.g. Register Nurses, LPNs, care technicians.

# Structure of Evidence-Based Budget

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- Your staffing budgets should be designed with qualitative and quantitative evidence:
  - **Qualitative**
    - Inclusive open dialogue
    - Transparency between nursing and finance
  - **Quantitative**
    - Built on internal and external benchmarks
    - Continuously focuses on productivity improvement
    - Budget formula driven with data
  - **Reporting tools must report budget to actual**

# Process of Evidence-Based Budget

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- **Process**

- Nursing /finance collaborated on the development of the budgets
- “Real-time” decisions must be made with the budget in mind with patient care considerations
- Timely bi-weekly variance reports are provided measuring budget metrics against actual performance
- Variance reporting needs action plans developed, actions taken, and measured for improvement
- Is staffing and time & attendance technologies utilized to the fullest?
- Is further education needed to fully understand the unit budget to better meet these metrics?

# The Personnel Budget

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- Personnel Budgets
  - Productive FTE Requirements
    - Based on the staffing patterns reflective of the workload of the unit.
  - Nonproductive FTE Requirements
    - Based on the anticipated paid benefit time.

# Producing an Effective Budget and the 4 Critical Areas

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- **Volume**

- What the annual volume of activity projected?
- What is the average daily census (procedures, cases, visits) for the unit?

- **Patient Mix/Acuity**

- What's the type of patient mix to be cared for? How is it the same or different from the past year?

- **Staff Mix**

- What's the mix of personnel needed to provide the care?

- **Allocation**

- What are the patient care needs over a 24 hour/ 7 day a week period?



# Components of the Personnel Staffing Budget Process

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- Review of prior year budget and past performance as compared to budget:
  - Review of personnel.
  - Review past Unit of Service (UOS).
  - Review current staffing plans.
- Determine if current staffing methodology is appropriate.
- Determine if quality standards/patient outcomes support the desired labor hours per unit of service.
- Determine if the number of staff is adequate.

# Budget Perspective: Benchmarking

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- **What are the potential improvement projects to improve value?**
  - How can nurse sensitive quality indicators improve while productivity improves?
    - Fall reduction
    - Pressure ulcer reduction
    - Ventilator associated pneumonia reduction
    - Central line infection reduction
    - Urinary track infection (UTI) reduction
- **Are there “sacred cows” as “untouchables?”**
  - Weekend “Baylor” plans?
  - Non-value added tasks?
  - Lack of team work?
  - Increased levels of worker fatigue?

# Components of the Personnel Staffing Budget Process

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- Tie budgeted hours and FTEs by cost center while determining actual vacancy rate.
- Establish budgetary salary dollar needs.
- Monitor budget on a concurrent basis.

# Potential Salary Cost Drivers

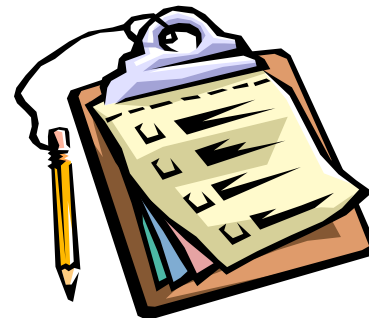
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## Labor

- Skill mix
- Overtime
- Agency usage
- Length of service
- Staffing plans
- Differential wage and salary program
  - ✓ Shift differentials
  - ✓ Charge pay differentials
  - ✓ Nurse certification differentials
  - ✓ Special staffing programs with differentials
- Coverage for non-productive (benefit) time

## Productivity

- Scope of service
- Departmental procedures
- Hours of operation/usage
- Staffing plans
- Staffing requirements



# Staffing Goals

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- **Targeted skill mix**
- **Targeted # of Full Time Equivalents (FTEs)**
  - **Correct positions within those FTEs for coverage**
- **Targeted paid hours of care per unit of service**
  - Hours of care Per Patient Visit (HPPV)
  - Hours of care Per Patient Day (HPPD)
  - Hours of care Per Patient Surgical Case (HPPSC)
  - Hours of care Per Patient Birth (HPPB)



# FTEs vs. Positions

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- Once the FTEs are determined, then the number of positions can be determined.
- Usually on nursing units, the number of positions is higher than the number of FTEs, due to mix of part-time and full-time employees needed for 24 hour and 7 day a week coverage.
- Factors to consider to determine positions:
  - Weekend coverage
    - What's the weekend work pattern?
      - Every other weekend?
      - Every third weekend?

# Sample Staffing Plan & FTEs: 12hr Shifts

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- See Handout
- How many shifts of RNs are needed to work the 7am-7:30pm 12 hour shift?
- How many RN FTEs are needed for the 7am-7:30pm shift?
  - Assumption: All RNs work 12.5 hour shifts with a 30 minutes unpaid meal break. Paid work time is 12 hours a day.

# Sample Staffing Plan & FTEs: 12 hr Shifts (cont'd)

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- See Handout
- How many shifts of RNs are needed to work the 7am-7:30pm shift?
  - Add up all of the shifts needed each day for the seven (7) days of the week.
    - 42 shifts are needed.
- How many RN FTEs are needed for the 7am-7:30pm shift? (All RNs work 12 hour shifts.)
  - Assumption: All RNs work 12.5 hour shifts with a 30 minutes unpaid meal break. Paid work time is 12 hours a day.



# Sample Staffing Plan & FTEs: 12 hr Shifts (cont'd)

---

- See Handout
- How many shifts of RNs are needed to work the 7am-7:30pm shift?
  - Add up all of the shifts needed each day for the seven (7) days of the week.
  - 42 shifts are needed
- How many RN FTEs are needed for the 7am-7:30pm shifts. (All RNS work 12 hour shifts.)

$$\frac{42 \text{ shifts}}{3 \text{ shifts}} = 14 \times .9 \text{ FTE}^{**} = 12.6 \text{ FTEs}$$

**(\*\*Note: 3 X 12 hr. shifts= 36 hours. 36 hours = .9 FTE)  
40 hours**

Assumption: All RNs work 12.5 hour shifts with a 30 minutes unpaid meal break. Paid work time is 12 hours a day.

# Sample Position Control: 12 hr Shifts

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- See Handout
- What are the total positions needed for the 12.6 FTEs of 12hr shift RNs on 7am-7:30pm shift?
  - Assumptions: All RNs work every third weekend.
  - There are no weekend only workers.
- |            |            |             |            |              |            |            |
|------------|------------|-------------|------------|--------------|------------|------------|
| <u>Sun</u> | <u>Mon</u> | <u>Tues</u> | <u>Wed</u> | <u>Thurs</u> | <u>Fri</u> | <u>Sat</u> |
| 6          | 6          | 6           | 6          | 6            | 6          | 6          |

# Sample Position Control: 12 hr Shifts (cont'd)

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- See Handout
- What are the total positions needed for the 12.6 FTEs of 12 hr. shift RNs on 7am-7:30pm shift?
  - Assumptions: All RNs work every third weekend.
  - There are no weekend only workers.
- |            |            |             |            |              |            |            |
|------------|------------|-------------|------------|--------------|------------|------------|
| <u>Sun</u> | <u>Mon</u> | <u>Tues</u> | <u>Wed</u> | <u>Thurs</u> | <u>Fri</u> | <u>Sat</u> |
| 6          | 6          | 6           | 6          | 6            | 6          | 6          |
- A total of 18 positions would be needed in order to have 6 RNs on and 12 RNs off every weekend.

# Sample Position Control: 12 hr Shifts (cont'd)

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➤

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
6	6	6	6	6	6	6

- A total of 18 positions would be needed in order to have 6 RNs on and 12 RNs off every weekend for 12.6 FTEs. For example:

- |           |            |            |
|-----------|------------|------------|
| 1) .9 FTE | 7) .9 FTE  | 13) .6 FTE |
| 2) .9 FTE | 8) .9 FTE  | 14) .6FTE  |
| 3) .9 FTE | 9) .9 FTE  | 15) .3 FTE |
| 4) .9 FTE | 10) .9 FTE | 16) .3 FTE |
| 5) .9 FTE | 11) .6 FTE | 17) .3 FTE |
| 6) .9 FTE | 12) .6 FTE | 18) .3 FTE |

# Non-Productive Time Coverage

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- Non- productive time for paid time off time might be another 14-16% for RNs.
  - 8 hour shift RNs:
    - Additional FTEs above the productive 8.4 FTEs would be needed, e.g. another 1.2 - 1.3 FTEs for a total of 9.6 - 9.7 FTEs for this day 8hr shift.
  - 12 hour shift RNs:
    - Additional FTEs above the productive 12.6 FTEs would be needed, e.g. another 1.8 - 2.0 FTEs for a total of 14.4 -14.6 FTEs for this day 12 hr shift.

# Non-Productive Time Coverage (cont'd)

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- An example of calculating % of Non- Productive Time for 8 hour shift RNs:

160 hours (4 weeks vacation)

16 hours (2 educational days)

32 hours (4 paid Holidays)

24 hours (3 Floating Holidays)

24 hours ( 3 sick days)

256 hours

- 2,080 hours - 256 hours = 1,824 Productive worked hours

$$\frac{\text{Non-productive hours}}{\text{Productive worked Hours}} = \frac{256}{1,824} = 14\%$$

# Non-Productive Time Coverage (cont'd)

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- Hospitals vary with their budgeting for this non-productive time .
  - Hospitals also have varying policies and procedures regarding if they hire into this non-productive time at all and/or how much is permitted to be hired into.
  - If hiring into some non-productive time, some of the part-time positions may then be hired into as full time positions to have the needed coverage.
  - The need to hire into non-productive may be dependent on your float pool and per diem staff available.

# **Relationship Between Planning, Budgeting & Control: Variance Analysis**



# Controlling Operating Results

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- Will *your* organization reach the expected operating margin projected for the annual budget?

**NO MARGIN : NO MISSION**



# Controlling the Operating Budget

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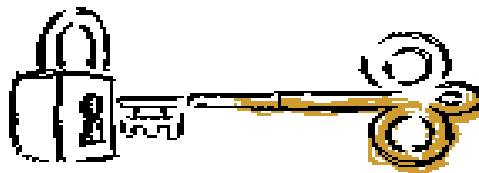
- The operating budget is a static budget.
  - It does not change as the actual events of the year unfold.
- Variances are the differences between the amount budgeted and the amount incurred.
- Understanding variances
  - *Why* did the variance occur?
    - External Causes
      - Prices, volume, regulations, availability of personnel
    - Internal Causes
      - Availability of personnel, technology, efficiency, policies, standards, acuity

# Controlling Operating Results

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## Variance analysis is key to success!!

- “Budgeting”
  - ✓ The process to develop a plan.
- “Budget”
  - ✓ The plan.
- “Variance”
  - ✓ The difference between the amount budgeted and the amount incurred.
    - Favorable variance: Spent *less* than expected
    - Unfavorable variance: Spent *more* than expected
- Reporting Tools
  - ✓ The proper timely reports are vital for managing resources.



# Better Variance Understanding and Control

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- **What can nurse managers influence and control?**
- **How do systems work in the manager's absence?**
  - A manager is paid for 40hr/week and responsible for 24/7, which is 168 hrs./week.
  - Therefore, that manager is only onsite **24%** of the time but has 24/7 responsibility.
  - What needs to “work right” when the manager is not here 76% of the time?
  - What are the challenges that others deal with when the manager is not present?

# Challenges in Staffing Resource Management

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- What are the challenges you face in staffing resources to meet budget?
  - Overstaffed?
    - How are staff cancelled in advance?
    - Prioritizing if staff need to be sent home
  - Clocking in early and clocking out late?
    - If a 12 shift RN works 40 hours of regular time each week, those extra 4 hours are **11% over** budgeted hours of 36 hours.)
      - Why?
      - How can time be better managed?
      - What processes need to change to assure staff get out on time?
  - Other challenges faced...



# Maximizing Use of Technology

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- Using reports from your time and attendance system
  - Daily?
  - Weekly?
  - Biweekly?
- Tools for predictive modeling based on documentation to outcomes in the EHR
  - Acuity trending
  - Assigning staff to acuity needs
  - Predicting needs based on past acuity trends by DRG per patient and LOS

- And more...



# More Questions for Discussion

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## *Questions for discussion:*

- Are positions correct for the FTEs needed and weekend coverage?
  - What needs changing?
- How is your actual overtime use compared to budget?
  - Why is it different?
  - How can it be reduced?
- What changes should you make in staffing to meet patient needs?
  - Do all 12 hour shifts work?
  - Would more part-time work hours help peaks in volume of activity?

# Table Top Questions for Discussion

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- How does your unit handle replacing RN staff when RNs call out sick on a day to day basis?
  - What recommendations for improvement do you have for this process?
- “Incidental overtime” (e.g. punching in early and punching out late) can be very costly to an organization. How does you unit handle this?
  - What recommendations for improvement do you have for better control and avoidance of these costs?
- How does you unit address your patient population and patient acuity when they prepare the staffing budget and matrix?
  - How do you address staffing needs when patient acuity either does up or down?
  - What recommendations for improvements do you have for this process?
- How does your unit handle staffing when there are significant census changes (increases or decreases) during your shift?
  - What recommendations for improvement do you have for this process?



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